A Conceptual Draft of the Proposed National Energy Board Damage Prevention Regulations & Guidance Notes

Foreword

The proposed *Damage Prevention Regulations* (DPR or Regulations) impose duties and responsibilities on Pipeline Companies and third parties performing activities which have the potential to damage a pipeline. The National Energy Board (NEB or Board) is committed to consult with stakeholders throughout the development of these Regulations.

In 2001, the Board undertook a survey of over 300 stakeholders to obtain guidance on what should or could be included in the DPR. This survey was expanded in 2002 when it was administered by COMPAS (under contract to the NEB) to 1200 landowners across Canada.

This document includes concepts which may be included in the Regulations or which may be included in the planned companion Guidance Notes. At this point, no effort has been made to separate the Guidance Notes from the Regulations. Instead, the document is intentionally structured to encourage readers to provide comments and input into the content of what will eventually form the Regulations and Guidance Notes.

The concept of fines for contraventions of the Regulations is introduced within this document. Readers are advised that any fines developed for contraventions of the DPR would not be included within the DPR proper. A separate regulatory instrument pursuant to the *Contraventions Act* would be required to introduce fines. At this time, the concept of fines is included for discussion purposes only.

The DPR will replace the *National Energy Board Pipeline Crossing Regulations, (Parts 1 & 2)* (the Crossing Regulations). For this reason, persons reviewing this document should ensure that the provisions of the Crossing Regulations which they deem necessary for safety, the protection of property and the environment are reflected within this draft document.

One of the major changes within this draft is a proposed change to the administration of the 30 metre safety zone. The Board intends to remove the requirement for leave as set out in subsection 112 (1) of the *National Energy Board Act* (the Act), as permitted pursuant to paragraph 112 (5) (c) of the Act. This will be replaced by a requirement to have the pipeline located prior to undertaking excavations using power-operated equipment or explosives if the activities have the potential to damage the pipeline. Pipeline Companies will be tasked with determining which specific activities would require the pipeline to be located. Leave under subsection 112 (1) will not be required provided the pipeline has been located or if the proposed activities do not have the potential to damage the pipeline.

In developing the Regulations and Guidance Notes, the Board has adopted the following statement of purpose and three supporting principles:

Statement of Purpose

The National Energy Board regulates activities on or adjacent to pipeline rights of way under Board jurisdiction in the interests of the protection of property and the environment and the safety of the public and of the company's employees.

Supporting Principles

1. The Board respects the rights of owners or users of property which contain or are adjacent to rights of way.
2. The Board respects the rights of companies in the management of affairs within their own purchased rights of way.
3. The Board promotes compliance through education, cooperation and enforcement.

The Regulations and Guidance Notes will be based upon and (if adopted) promulgated pursuant to the following sections of the Act:

Section 48

48. (1) *To promote safety of operation of a pipeline, the Board may order the company to repair, reconstruct or alter part of the pipeline and may direct that, until the work is done, that part of the pipeline not be used or be used in accordance with such terms and conditions as the Board may specify.*

(2) *The Board may, with the approval of the Governor in Council, make regulations governing the design, construction, operation and abandonment of a pipeline and providing for the protection of property and the environment and the safety of the public and of the company's employees in the construction, operation and abandonment of a pipeline.*

(2.1) *The Board may make orders exempting companies from any or all of the provisions of the regulations made under subsection (2).*

(2.2) *In any order made under subsection (2.1), the Board may impose such terms and conditions as it considers proper.*

(3) *Every person who contravenes a regulation made under subsection (2) is guilty of an offence punishable on summary conviction.*

Section 108

108. (1) *In this section and sections 110 and 111, "appropriate authority" means*

(a) with respect to a navigable water, the Minister of Transport, and
(b) [Repealed, 1996, c. 10, s. 244]
(c) with respect to any other utility, the Board;

"utility" means a navigable water, a highway, an irrigation ditch, a publicly owned or operated drainage system, sewer or dike, an underground telegraph or telephone line or a line for the transmission of hydrocarbons, electricity or any other substance.

(2) *The pipeline of a company may, if leave is first obtained from the appropriate authority, be carried across any utility and for that purpose may be constructed on, along or under any such utility.*

(3) *On an application for leave under this section, a company shall submit to the appropriate authority such plans and profiles and other information as the appropriate authority may require.*

(4) *The appropriate authority may, by order, grant the application in whole or in part and on such terms and conditions as the appropriate authority considers proper.*

(5) *The appropriate authority may provide that leave under this section is not necessary if the pipeline is constructed in accordance with the orders, regulations, plans and specifications made, adopted or approved by the appropriate authority for those purposes.*

(5.1) *The Board may make orders or regulations prescribing the circumstances in which or conditions under which leave under this section is not necessary to carry a pipeline across a utility other than a navigable water or a railway.*

(6) *The appropriate authority may grant leave under this section after construction of the proposed work has commenced if the appropriate authority is satisfied that the work was urgently required and, prior to the commencement of construction, the appropriate authority was notified of the company's intention to proceed with the proposed work.*

Section 112

112. (1) *Subject to subsection (5), no person shall, unless leave is first obtained from the Board, construct a facility across, on, along or under a pipeline or excavate using power-operated equipment or explosives within thirty metres of a pipeline.*

(2) *Subject to subsection (5), no person shall operate a vehicle or mobile equipment across a pipeline unless leave is first obtained from the company or the vehicle or mobile equipment is operated within the traveled portion of a highway or public road.*

(3) *The Board may, on granting an application for leave under this section, impose such terms and conditions as it considers proper.*

(4) *The Board may direct the owner of a facility constructed across, on, along or under a pipeline in contravention of this Act or the Board's orders or regulations to do such things as the Board considers necessary for the safety of the pipeline and may, where the Board considers that the facility may impair the safe operation of the pipeline, direct the owner to reconstruct, alter or remove the facility.*

(5) *The Board may make orders or regulations governing*

- (a) *the design, construction, operation and abandonment of facilities constructed across, on, along or under pipelines;*
- (b) *the measures to be taken by any person in relation to*
  - (i) *the construction of facilities across, on, along or under pipelines,*
  - (ii) *the construction of pipelines across, on, along or under facilities, other than railways, and*
  - (iii) *excavations within thirty metres of a pipeline; and*
- (c) *the circumstances in which or conditions under which leave under this section is not necessary.*

(5.1) *Without limiting the generality of paragraph (5)(c), orders or regulations made under that paragraph may provide for the prohibiting of excavations in an area situated in the vicinity of a pipeline, which area may extend beyond thirty metres of the pipeline, during the period that starts when a request is made to a pipeline company to locate its pipeline*

and ends

(a) at the end of the third working day after the day on which the request is made; or

(b) at any later time that is agreed to between the pipeline company and the person making the request.

(6) The Board may, by order made on any terms and conditions that the Board considers appropriate, exempt any person from the application of an order or regulation made under subsection (5).

(7) The provisions of sections 49 to 51.3 relating to inspection officers apply for the purpose of ensuring compliance with orders and regulations made under subsection (5).

Table of Contents

Interpretation....7

Part 1 - General....8

Part 2 - Planning....11

Part 3 - Locates....13

Part 4 - Activities....18

Part 5 - Awareness....19

Part 6 - Reporting....22

Part 7 - Audits, Inspections and Enforcement....24

Part 8 - Records....26

Interpretation

Goal: To define words used within the Regulations that have a meaning different from the meaning which is commonly understood or defined in the Oxford English Dictionary and to provide a "shorthand" for terms which may be used frequently within the Regulations.

Content: This section of the Regulations will be small due to the use of plain language to the greatest possible extent. Terms likely to be included in the interpretation section are:

"Act" means the National Energy Board Act;

"facility" includes pipelines and utilities as defined within section 108 of the Act;

"locate" means the activities involved in having the position of a buried pipeline marked on the ground surface;

"locate ticket" is a record of the activities and communications carried out by a locator and provided by the locator to the person who requested the locate;

"locator" means a person who is qualified to perform a locate;

"One Call or One Call Centre" means a nonprofit association or other organization of operators of subsurface installations which coordinates requests for locates and provides advance warning of excavations or other work close to existing subsurface installations, for the purpose of protecting those installations from damage;

"working day" means Monday, Tuesday, Wednesday, Thursday or Friday excluding statutory holidays (e.g. 3 full working days notice from a request made on a Wednesday would mean a response is required by the close of business on Monday of the following week).

PART 1 - GENERAL

Goal: To establish where and when the Regulations will apply and to set out what is required for compliance.

Content: The contents of this part will:

- describe where and when the Regulations will apply (*Application*);
- establish requirements for written approvals (*Approval*);
- establish notification requirements (*Notification*);
- require Pipeline Companies to be actively involved in damage prevention initiatives (*Initiatives*);
- require Pipeline Companies to be members of "One Call Centres" (*One Call*); and
- require Pipeline Companies to continually inspect their facilities to identify activities which have the potential to damage the pipeline (*Monitoring & Surveillance*).

Application

All work having the potential to damage pipelines falling under the jurisdiction of the NEB must comply with the Regulations. This includes:

- the construction or placing of any structure on the right of way of a pipeline;
- construction of any highway, private road, railway[1], irrigation ditch, drain, drainage system (including agricultural tile drainage), sewer, dike, telegraph, telephone line or line for the transmission of hydrocarbons, power or any other substance that is or is to be carried across, along, upon or under any pipeline;
- construction of a pipeline across, along, upon or under any pre-existing highway, private road, railway[1], irrigation ditch, drain, drainage system, sewer, dike, telegraph, telephone line or line for the transmission of hydrocarbons, power or any other substance;
- all excavation activities on land containing a pipeline[2]; and
- the operation of vehicles or mobile equipment over a pipeline unless they are operated within the traveled portion of a highway or public road.

Approval

Approval of the Pipeline Company is required prior to commencing any activity within the boundaries of the right of way. All requests for approval should be made directly to the Pipeline Company and shall be approved or denied within 10 working days of receipt unless a longer time period is agreed to by both parties.

If approval is denied for any reason, the decision may be appealed by submission of a written request to the Board who will then investigate and determine if the decision was reasonable and

[1] The Act provides the authority to make regulations and orders pertaining to the safety of persons, the protection of property and the environment. The Act does not allow the Board to establish conditions or grant leave when pipelines are crossing railways (see s. 108 of the Act).

[2] "Land containing a pipeline" means a defined piece of property encumbered by a pipeline right of way or easement agreement.

fair.

No approval is required for activities which take place off the right of way provided the pipeline is located prior to commencement of the activities or the activities pose no risk to the pipeline. The determination of risk will be made by the Pipeline Company. The Pipeline Company shall develop guidance for its employees and the public which will indicate how the Pipeline Company determines the risk level of various activities (*see Part 4 – Activities*).

Pursuant to section 81[3] of the Act, the approval of the Board is required for mining or prospecting activities within 40 metres of the pipeline right of way. Seismic investigations are included under the definition of prospecting activities.

Leave for undertaking excavations within 30 metres of a pipeline right of way using power-operated equipment or explosives is not required provided that:

- the Pipeline Company has been notified of the proposed activities; and
- the pipeline has been located[4] (if determined necessary by the Pipeline Company).

Approval from the Pipeline Company is required for the movement of vehicles and mobile equipment within or across a pipeline right of way. Companies can not provide exemptions from this requirement but may provide "blanket" approvals which would essentially remove the requirement for individual applications for the movement of vehicles or mobile equipment which do not have the potential to damage the pipeline. The Board expects that blanket approvals will be used for activities such as those associated with agricultural operations.

Notification

Anyone planning to excavate on land which contains a pipeline must provide at least 3 working days notice to the Pipeline Company (note: if the proposed excavation is on a pipeline right of way they must have prior approval of the Pipeline Company as set out under *Approval*). During this 3 day period, the location of subsurface facilities shall be marked by the Pipeline Company or its agents unless the Pipeline Company waives this requirement based on knowledge of the proximity of the planned excavation to the pipeline.

Pipelines will be located at no cost to the person requesting the locate. In the event that locate requests are made for nuisance purposes, the Board may fine the parties responsible after determining that there has been an abuse of the Regulations.

No excavation work can take place until the Pipeline Company has completed the locate or determined that there is no need for a locate. Failure of the Pipeline Company to provide a response or to provide a locate within 3 working days may result in a fine being levied against the Pipeline Company or other enforcement actions.

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[3] No person shall work or prospect for mines or minerals lying under a pipeline or any of the works connected therewith, or within forty metres therefrom, until leave therefor has been obtained from the Board. The Board is unable to delegate or waive the requirement for obtaining the leave of the Board as this power is not provided within the Act.

[4] Information on requirements for pipeline locates is contained within Part 3 of this document.

Initiatives

Pipeline Companies should be active members of damage prevention organizations where they exist along the length of their right of way. Where there are no such organizations, Pipeline Companies will actively promote damage prevention and attempt to organize groups of interested parties into organizations whose prime focus is prevention of damage to the underground infrastructure.

One Call

Pipeline Companies must be members of One Call Centres where these centres exist. In areas where One Call Centres do not exist, Pipeline Companies shall develop and maintain a single point of contact for inquiries and locate requests pertaining to pipelines under the jurisdiction of the NEB. Companies may (at their option) develop a national contact number for inquiries and locate requests for areas not presently serviced by a One Call Centre.

Excavators working near pipelines under NEB jurisdiction must contact One Call Centres prior to excavation. Failure to use One Call may result in a fine being levied by the NEB against the excavator.

One Call Centres will provide a single source of contact for obtaining locates of all pipelines and associated facilities under the jurisdiction of the NEB.

One Call Centres should

- have documented and pro-active public awareness, education and damage prevention programs;
- have clearly defined areas of geographical responsibility based on national or provincial boundaries;
- have cooperative agreements with existing One Call Centres in areas where they exist;
- provide the coordination of locates free of charge;
- be financially supported by contributions of member companies;
- be governed by a board of directors representing member companies and the public;
- be able to accept locate requests 24 hours a day and seven days a week;
- keep records of all correspondence including telephone conversations;
- have a means of verifying that locates have been performed; and
- have clearly defined operating practices which are publicly available.

Monitoring & Surveillance

Pipeline Companies must establish a program for monitoring and surveillance of the right of way. This program should be designed to detect activities having the potential to damage a pipeline which occur on or near existing pipelines.

The frequency of monitoring and surveillance shall be higher in areas of greater risk or elevated consequence (urban areas, population centres, high subsurface activity levels, etc.).

PART 2 - PLANNING

Goal: To establish regulatory requirements for persons planning to perform activities which have the potential to damage a pipeline.

Content: The contents of this part will:

- establish minimum requirements for pre-excavation planning (*Pre-Excavation*);
- establish requirements for drawings showing existing pipelines (*Drawings*); and
- require participation in municipal planning processes (*Planning*).

Pre-Excavation

Before an excavation is performed on land containing a pipeline, the person proposing the excavation should check available sources for information regarding subsurface installations which may be damaged by the work. This would include searching land titles and obtaining copies of easement agreements and registered plans showing pipeline rights of way, etc. The person proposing the excavation should also visit the site to look for indications that a pipeline (or other buried facilities) may be present. Landowners or stewards should be consulted and One Call should be used to have the pipeline located.

If a plan of the proposed worksite exists (subdivision or building plan) then this should clearly show the location and ownership of existing utilities including pipelines. It should also provide contact information and should provide any special considerations for working near or across these facilities.

Drawings

Drawings for any work which poses a risk to the pipeline should show all underground facility information. If information was gathered from field located facilities or from underground facility surveys this should be noted on the plans (e.g. depth of cover, materials, etc.).

Active, abandoned, out-of-service, and proposed facilities should be shown. Design plans should include a summary drawing showing the location of all proposed excavations. Excavation plans should be distributed to all facility owners/operators to provide the opportunity to furnish additional information, clarify information, or identify conflicts.

Planning

Wherever possible, Pipeline Companies should be actively involved in the planning and subdivision approval processes within each municipality in which they operate a pipeline. Where the municipal approval authority uses a circulation process for comments on proposed changes to land use (including subdivision), Pipeline Companies should make submissions whenever the proposed change affects land upon which they operate a pipeline.

Circulation responses should:

- clearly indicate that the land contains a pipeline;
- indicate that they fall under the jurisdiction of the NEB;
- provide direction on easement conditions and the requirements of the Regulations;
- offer alternatives where the proposed change to the land impacts their pipelines;
- provide contact information for the Pipeline Company; and
- provide information on the physical characteristics of the pipeline (product, pressure, size, etc.).

Companies responding to circulations should consider the incremental risks associated with the proposal and any requirements they may have currently or which they may require in the future to ensure the continued and safe operation of their pipeline.

Copies of all planning circulation responses may be requested by the NEB for audit purposes.

PART 3 - LOCATES

Goal: To establish the requirements for locates including marking, communication, methods and locator qualifications.

Content: The contents of this part will:

- establish uniform marking requirements for buried facilities (*Marking*);
- prescribe minimum qualifications and training requirements for persons performing locates (*Qualifications*);
- establish the minimum communication requirements between locators and excavators (*Communication*); and
- prescribe methods and resources for locates (*Methods*).

Marking

Colour-coded surface marks shall be used to indicate the location and route of buried lines. To increase visibility and for use where environmental conditions prevent surface marking (snow, ice, etc), temporary stakes or flags should supplement surface marks.

All marks and markers should indicate the name, initials or logo of the company that owns or operates the line.

Markings and locate tickets are considered valid for a period of two weeks after a locate has been completed or until such time as the markings are no longer legible and do not provide clear direction on where a facility is located (whichever occurs sooner).

If the surface over the buried line is to be removed or excavated, supplemental offset markings may be used. Offset markings should be on a uniform alignment and should clearly indicate that the actual facility is a specific distance away.

The colours used to identify underground facilities shall comply with the American Public Works Association *Guidelines for Uniform Temporary Marking of Underground Facilities.* These are:

RED	Electric Power Lines, Cables, Conduit and Lighting Cables
YELLOW	Gas, Oil, Steam, Petroleum or Gaseous Materials
ORANGE	Communication, Alarm or Signal Lines, Cables or Conduit
BLUE	Potable Water
GREEN	Sewers and Drain Lines
PURPLE	Reclaimed Water, Irrigation and Slurry Lines
PINK	Temporary Survey Marking
WHITE	Proposed Excavation

Markings should be placed accurately to identify the centreline of the buried facility. Accuracy shall be within 0.6 metres measured horizontally. Where the depth of the pipeline is provided as part of the locate and has been determined electronically or by probing, the depth must be confirmed by exposing the pipeline. Exposure will normally be performed by the party requesting the locate under the direct supervision of the Pipeline Company.

Qualifications

Persons performing locates (locators) must be adequately trained in order to carry out their work. Pipeline Companies shall develop and maintain training programs and minimum qualification and competency requirements for locators.

At a minimum, locators should:

- understand plans showing subsurface utilities;
- possess a basic understanding of construction standards and practices;
- be competent in the use of equipment they are likely to use;
- understand the principles of how electronic locators work;
- understand the varied relationships between facility owners, excavators and contractors;
- complete periodic testing to verify their knowledge and abilities; and
- carry identification indicating they have been trained and are qualified to locate specific types of facilities on behalf of the owner(s) of the facilities.

Companies should maintain a list of persons qualified to locate their facilities. This list should include:

- a description of the qualifications of the locator;
- a copy of any certificates held by the locator or issued by the company to the locator (pertinent to locating);
- the period for which they are qualified; and
- the name, address and contact information for the locator.

Communication

Locate tickets shall be generated after a locate has been requested. Information collected on the ticket should include:

- the date;
- the name(s) of the person(s) accepting the locate and the locator;
- the company for whom the locate was performed and the locating company;
- contact numbers for all parties;
- a list by name/location and sketches of the areas to be excavated;
- the expiry date or "life" of the locate ticket (2 weeks); and
- any follow up agreements that might be necessary.

Locators should meet with the excavator to communicate the meaning of markings and the information on the locate ticket. In addition, the excavator must be made aware of the legal requirements arising from the Regulations.

The excavator should provide written verification that they understand the aforementioned and also that they are aware of what steps need to be taken in the event any underground facilities (marked or unmarked) are damaged.

Copies of all communications between the locator and the excavator should be provided to each facility owner and the One Call Centre.

Methods

Pipeline locates shall be performed using generally accepted methods such as:

- exposing the pipeline;
- use of electronic methods (direct connection and induction);
- probing; and
- using as-built drawings.

Any method practical may be used for locates provided it can meet the accuracy requirement of plus or minus 0.6 metres horizontally.

PART 4 - ACTIVITIES

Goal: To establish the requirements to safely perform activities having the potential to damage a pipeline.

Content: The contents of this part will:

- provide direction on how to assess if an activity has the potential to damage a pipeline (*Assessment*);
- differentiate between federal and provincial jurisdiction over occupational safety and health (*Jurisdiction*); and
- establish requirements for safe excavation (*Excavation Practice*).

Assessment

The determination of what activities have "the potential to damage a pipeline" requires a reasonable consideration of risk.

Events which are unlikely to occur and which have relatively minor effects on the continued safe operation of the pipeline or which would result in minimal damage to property or the environment are low risk. Conversely, events which are likely to occur and which are likely to result in damage to a pipeline resulting in injuries or damage to property or the environment are classified as high risk. Some examples of low, medium and high risk activities are:

Low Risk

- soil disturbances over an existing pipeline which disturb less than the top 0.3 metres of soil and which have been assessed as acceptable activities by the Pipeline Company with respect to their potential to damage the pipeline as a result of loading and depth of soil disturbance; and
- excavations off the right of way which are properly shored or which are shallow enough that they do not require shoring under the appropriate occupational safety and health legislation.

Medium Risk

- supervised excavations within the right of way which have been approved by the Pipeline Company and which are continuously inspected by the Pipeline Company; and
- moving heavy equipment over the buried pipeline after the Pipeline Company has assessed the impact of the additional loading stress as marginal.

High Risk

- an excavation in unstable soil immediately adjacent to the right of way which has not been properly shored; and
- deep tillage on land where the operator of the equipment has not consulted with the Pipeline Company.

Jurisdiction

All excavation work having the potential to damage a federally regulated pipeline falls under the jurisdiction of the NEB. The application of occupational safety and health legislation is dependent upon the nature of the work being performed as shown below:

Nature of Work	Legislative Requirements
Work conducted on behalf of a federally regulated Pipeline Company by a contractor	Provincial excavation requirements must be met (usually)
Work conducted on behalf of a federally regulated Pipeline Company by the Pipeline Company	Federal excavation requirements from COSH section 3.12 must be met
All other work	Provincial excavation requirements must be met

Excavation Practice

Prior to performing any excavation having the potential to damage a pipeline, the person proposing to perform the excavation should mark out the location or boundary of all proposed excavations using markings which are visible and which may be maintained until such time as the excavation is complete (see Part 3 – Locates). Offset markings may be used where direct marking is impractical. Excavation may not proceed beyond the limits of the markings.

Pipeline Companies shall mark the location of their facilities within three (3) working days of being notified of impending work in accordance with Part 1.

The pipeline must be exposed by hand or other methods which will not damage the pipeline prior to conducting any mechanical excavation work within three (3) metres of the marked location of a buried facility. The exposed pipe location should coincide with the centreline of any facility which will be crossing the pipeline.

No mechanical excavating equipment may be operated within three (3) metres of the exposed facilities unless it is directed by a competent person designated by the Pipeline Company to ensure that there is no contact with the pipeline.

Where excavation work parallels a pipeline the pipeline shall be exposed by the excavator (using a method or methods approved by the Pipeline Company) at sufficient intervals to ensure adequate separation is maintained between the excavation and the buried facilities.

Pipeline Companies should determine the necessary requirements for the protection of their facilities during excavation activities within the right of way. These requirements should include direction on required supports for exposed facilities. Excavators working within a pipeline right of way should abide by the directions of the Pipeline Company.

The excavator must contact the One Call Centre to refresh the ticket when excavation continues

past the life of the ticket (see Part 3 – Locates).

The excavator must protect and preserve the staking, marking, or other designations for underground facilities until they are no longer required for proper and safe excavation. The excavator must stop excavating and notify the One Call Centre for re-marks if any facility mark is removed, altered or is no longer visible.

The Pipeline Company should inspect the condition of the pipeline prior to backfilling and must be present during backfilling until the trench is completely filled. The Pipeline Company shall obtain as-built measurements and make drawings of all facilities installed within a pipeline right of way. Records should be maintained in accordance with Part 8 of the Regulations.

The excavator must protect all facilities from damage when backfilling an excavation where the pipeline has been exposed. Material that could damage existing facilities or interfere with the accuracy of future locates should not be buried in the excavation.

PART 5 - AWARENESS

Goal: To prevent damage to pipelines by establishing regulatory requirements governing awareness programs by which Pipeline Companies communicate essential information with all audiences involved in activities which have the potential to damage a pipeline.

Content: The contents of this part will:

- establish minimum requirements for awareness programs (*Programs*); and
- provide direction on signage and other marking methods designed to increase awareness (*Awareness Markings*).

Programs

Awareness programs are intended to reduce the frequency of damage resulting from external forces such as excavations and equipment loading. They may achieve this by providing the following information:

- One Call information;
- descriptions of permissible and non-permissible activities within the right of way;
- information on what activities may have the potential to damage the pipeline;
- excavation requirements;
- legislative requirements;
- illustrations and descriptions of pipeline markers;
- instructions on how to recognize an incident;
- educating audiences about emergency response and emergency contacts; and
- informing audiences of the location and physical attributes (size, material, contents, pressure, etc.) of the pipeline.

There are numerous audiences that should be addressed by awareness programs. These include

- the public living or working near a pipeline including:
  - landowners;
  - residents or businesses on or adjacent to the pipeline rights of way;
  - utility companies and railroads;
  - homeowner organizations and neighbourhood associations;
  - other pipeline companies;
  - organizations such as schools, churches, recreation centres, etc. along the pipeline route; and
  - organizations with an interest in damage prevention;
- government agencies, media outlets and emergency response representatives including:
  - provincial departments or agencies with responsibilities respecting energy, safety, transportation, environment or health;
  - municipal governments and planning authorities;
  - emergency responders (police, fire, ambulance);

    - hazardous material response teams;
    - disaster recover or emergency measures authorities; and
    - local media; and

- excavators and contractors including:
    - private contractors;
    - seismic or geophysical contractors;
    - industry associations; and
    - municipal, provincial and federal public works departments.

The frequency with which stakeholders are consulted should be sufficient to ensure that the audience develops and maintains an ongoing awareness of the presence of the pipeline and the contents of the awareness program. Different audiences may be targeted at different frequencies based on factors such as the risks associated with pipeline damage; population density, incidents, etc. The maximum interval between contacts with target audiences should be 36 months.

The awareness program should include provisions for quick communication of essential information to audiences when changes to the pipeline or its operation result in changes to the contents of the awareness program.

The contents of awareness programs should be conveyed effectively to target audiences on an ongoing basis. Distribution methods could include:

- door to door contact;
- brochures;
- mailings (with response cards);
- mementos;
- presentations;
- internet; and
- media advertisements.

Awareness programs should be formally evaluated by an agent independent of the Pipeline Company every three years to assess the effectiveness of the message and media.

This evaluation should include:

- a repeatable measurement of audience awareness (such as an assessment of the achievement of goals);
- review and recommendations for updating of program content; and
- opinion surveys of audiences with respect to the Pipeline Company.

Awareness Markings

Awareness relies heavily on the use of highly visible markings. Pipeline marker signs indicate that a pipeline is located nearby and provide important information on emergency response and ownership. Signs on facilities and vehicles also increase public awareness of pipelines.

A combination of above ground and below ground markers should be used to identify underground facilities.

The purpose of above ground markers is to identify underground facilities, not to circumvent the One Call process. Pipeline signs and marker posts do not indicate the exact location of a pipeline or right of way. **ALWAYS** call before you dig.

Above ground markers should :

- be highly visible where the proximity to development or other activities having a high potential to result in damage to the pipeline are occurring;
- comply with the requirements of CSA Z662;
- be placed within sight of each other where practicable;
- be placed within 1 metre measured horizontally from the pipeline;
- provide the One-Call number;
- indicate that the NEB has the regulatory authority over the pipeline; and
- be bilingual where necessary.

Below grade markers such as high visibility marker tape should be installed at locations where it can reasonably be expected that the pipeline will be exposed at some future date (e.g. within road allowances, utility rights of way, at crossings, etc.).

PART 6 - REPORTING

Goal: To establish reporting requirements which will provide stakeholders with useful, repeatable and comparable data for analysis of the effectiveness of the Regulations.

Content: The contents of this part will:

- provide direction on what needs to be reported when and to whom *(Reporting)*; and
- establish the minimum requirements for incident investigation *(Investigation)*.

Reporting

Any contact with a pipeline resulting in a release of contents from the pipe must immediately be reported to local emergency response agencies through the use of "911" or other applicable emergency phone numbers.

The NEB and the Transportation Safety Board (TSB) have established a one window reporting system for incidents affecting the safe operation of federally regulated pipelines.

All incidents defined as reportable herein or incidents as identified by the definition of "reportable commodity pipeline incident" within the Transportation Safety Board Regulations must be reported to the TSB Occurrence Hot Line (819) 997-7887 (collect calls accepted).

Under the Regulations, Pipeline Companies have an obligation to report the following incidents as soon as possible after they have been detected or reported to them:

- accidental contact with a pipeline having the potential to damage the pipeline during any excavation;
- coating damage resulting from excavation activities;
- any activity having the potential to damage a pipeline;
- pipeline locates where the accuracy is not within the tolerances established within Part 3 - Locates; and
- mining or prospecting activity (including seismic survey) within 40 metres of the right of way which has not been approved by the Board.

Persons performing activities which have the potential to damage a pipeline must report the incidents summarized below to the Pipeline Company as soon as possible after they occur. The Pipeline Company may then be obligated to report the incidents to the TSB as set out in the preceding paragraphs.

- unplanned or unintentional contact with a pipeline;
- any damage to pipe or other facilities such as signs, buildings, etc.;
- operating vehicles or mobile equipment over the pipeline and not on the traveled surface of a roadway without prior approval by the Pipeline Company; and
- any work which has placed the pipeline at risk (such as subsidence or collapse of an excavation adjacent to a pipeline, activities resulting in excessive vibration, transient soil loads from explosives, etc.).

In addition to the reportable incidents discussed above, Pipeline Companies shall provide an annual report to the Board by the end of January each year detailing the following information for the previous calendar year:

- number and type of requests received for work within the right of way (equipment crossings, pipeline crossings, etc.);
- number and type of requests granted and denied for the work referred to above;
- number and type of reportable incidents;
- copies of company inspection reports for incidents where the pipe has been contacted by any object having the potential to damage the pipeline including a record of any repairs made or required; and
- copies of investigation reports upon request.

Investigation

All of the incidents referred to above must be investigated by the Pipeline Company as soon as practical. The findings from the investigation shall be communicated verbally and in written form to all parties involved in the incident. A copy of the investigation report should be retained on file by the Pipeline Company for the life of the pipeline.

The investigation report should obtain the following minimum information:

- the nature, location, date and time of the incident;
- the names, addresses and contact information for all persons involved in the incident and the response;
- a full description of the damage to the pipeline (if any);
- the pipeline contents and operating parameters at the time of the incident;
- copies of locate tickets;
- confirmation that One Call was contacted;
- a statement as to the accuracy of surface markings (if a locate was performed);
- photographs and sketches providing pertinent details;
- a description of any interruption of or reduction in service resulting from the incident;
- a description of the actions taken by the Pipeline Company to protect persons, property and the environment;
- a description of the repairs made or to be made by the Pipeline Company;
- the nature and extent of any adverse environmental effects;
- the nature and extent of any concerns expressed to the Pipeline Company by the public related to the incident;
- a descriptive assessment of any continuing hazards resulting from or related to the incident;
- a listing of vehicles and equipment on site at the time of the incident;
- other significant facts that are known to be relevant to the cause of the incident; and
- a list of witnesses along with their addresses and telephone numbers.

PART 7 - AUDITS, INSPECTIONS AND ENFORCEMENT

Goal: To identify requirements for internal and external audits and inspections and to provide clear direction on enforcement actions designed to prevent future occurrences through education and deterrence.

Content: The contents of this part will:

- establish the requirements for internal and external audits (*Audit*);
- establish requirements for inspection (*Inspection*); and
- establish enforcement abilities of NEB Inspectors (*Enforcement*).

Audit

Pipeline Companies must develop an effective audit program and are required to conduct internal audits of their damage prevention program(s) at a minimum frequency of every three (3) years to ensure compliance with the requirements of the Regulations and to assess the effectiveness of the company program(s). Audits should identify all non-compliance and the associated corrective actions undertaken. Copies of internal audit reports should be retained by the company for the life of the pipeline and should be readily available for audit by the Board upon request.

Audits may be conducted by the Board to ensure compliance with the Regulations as well as pertinent portions of the Act and other legislative instruments. At least one month prior to undertaking an audit, the NEB shall request copies of current information respecting compliance with the Regulations. A formal audit will follow and is likely to take 1 to 3 days to complete depending on the complexity of the programs in place.

Inspection

Pipeline Companies are required to inspect:

- activities having the potential to damage a pipeline which take place within the boundaries of the right of way;
- all exposed facilities prior to backfilling; and
- any other activities having the potential to damage the pipeline.

Enforcement

Non-compliance with the Regulations may result in the penalties being assessed against responsible Pipeline Companies or other parties[5]:

Non-Compliance	Factors	Penalty
No locate performed prior to excavating on land encumbered by a pipeline	First Offence	To be determined[6]
No locate performed prior to excavating on land encumbered by a pipeline	Second Offence	To be determined[6]
No locate performed prior to excavating on land encumbered by a pipeline	Third Offence	To be determined[6]
Failure to report unplanned contact with a pipeline	First Offence	To be determined[6]
Failure to report unplanned contact with a pipeline	Second Offence	To be determined[6]
Locate accuracy less than 0.6 metre	First Offence	To be determined[6]
Locate accuracy less than 0.6 metre	Second Offence	To be determined[6]
Failure to contact One Call prior to excavation on land encumbered by a pipeline	First Offence	To be determined[6]
Failure to contact One Call prior to excavation on land encumbered by a pipeline	Subsequent Offences	To be determined[6]
Failure to comply with any other requirement of the Regulations	All	To be determined[6]

[5] Readers are advised that any fines developed for contraventions of the DPR would not be included within the DPR, proper. A separate regulatory instrument pursuant to the *Contraventions Act* would be required to introduce fines.
[6] To be determined up to the maximum allowed under the *Contraventions Act*.

PART 8 - RECORDS

Goal: To ensure that adequate records are retained for use in audits, investigations and other analyses.

Content: The contents of this part will establish the requirements for records retained by the Pipeline Company (*Company Records*).

Company Records

Pipeline Companies must keep records as required within the Regulations. In addition, companies should:

- prepare an annual report on competency of pipeline locators;
- maintain records of excavations where the pipeline has been exposed with documentation of:
  - pipe condition (coating, etc.);
  - backfill material;
  - as-built drawings;
  - date, time location (GPS data where practical), etc.;
  - site specific details;
  - identities and responsibilities of all persons on site;
  - agreements pertinent to the excavation activity; and
  - photographic records of the excavation.
- retain records for the life of the pipeline.

National Energy Board | Office national de l'énergie

File 185-A000-36
29 May 2002

All Pipeline Companies Under the National Energy Board's Jurisdiction and Stakeholders

National Energy Board *Damage Prevention Regulations*

The National Energy Board (the Board or NEB) has prepared a conceptual draft of the proposed *Damage Prevention Regulations* and planned companion guidance notes. The document, entitled *A Conceptual Draft of the Proposed National Energy Board Damage Prevention Regulations & Guidance Notes* (the Conceptual Draft), is attached for your reference and comment. This document contains the framework, concepts and ideas which will eventually form the *Damage Prevention Regulations*.

The Board has also published the results of a national survey of pipeline landowners conducted by COMPAS between 17 January and 2 February 2002. The survey, entitled *Canadian Pipeline Damage Prevention Regulations: Landowner Survey* (the Landowner Survey) is available from the NEB library or from the NEB website at **www.neb-one.gc.ca.**

Extensive consultations on the Conceptual Draft are planned over the next six months. These will include "town hall" style meetings in numerous locations across Canada. Planning of these meetings is currently underway. The precise locations, times and dates of these meetings will be released by the Board within the next few months.

Individual meetings with stakeholders will be accommodated to the best of the Board's ability. Should you desire to meet with Board staff to discuss the contents of the Conceptual Draft or the Landowner Survey, or if you have any questions or comments regarding these documents, please contact Ken Paulson as provided below:

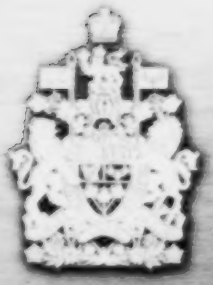
Ken Paulson:
Telephone: (403) 299-3194
Toll Free: 1-800-899-1265
Facsimile: (403) 292-5503
Email: kpaulson@neb-one.gc.ca
Mailing: 444 - 7th Avenue S.W.
Calgary, Alberta T2P 0X8

Yours truly,

Michel L. Mantha
Secretary

Attachment

National Energy Board



Office national de l'énergie

DAMAGE PREVENTION REGULATIONS

DRAFT GUIDANCE NOTES

Canada

National Energy Board

Office national de l'énergie

DAMAGE PREVENTION REGULATIONS

DRAFT GUIDANCE NOTES

Canada

FOREWORD

The National Energy Board (the NEB or the Board) is committed to ensuring the continued safe and reliable operation of Canada's pipeline infrastructure. In 1988, the Board established the *National Energy Board Pipeline Crossing Regulations, Part I* and the *National Energy Board Pipeline Crossing Regulations, Part II* (the Pipeline Crossing Regulations) to protect pipelines from damage and to establish safe and consistent requirements for work near federally regulated pipelines.

In 2000, the Board began a review of the Pipeline Crossing Regulations. To assist in this work, the Board carried out two surveys of stakeholders in 2001 and 2002. These surveys are available on the Board's Website at www.neb-one.gc.ca under the heading of "Safety and Environment."

The Board considered the results of these surveys and in May 2002 released *A Conceptual Draft of the Proposed National Energy Board Damage Prevention Regulations and Guidance Notes* (the Conceptual Draft). Since then, this document has formed the basis of consultations with interested stakeholders on what should be included within the proposed new *Damage Prevention Regulations* (the Regulations or the DPR).

Between June 2002 and June 2003, NEB staff met with organized groups of stakeholders interested in the prevention of damage to the underground infrastructure. These "focus" meetings took place in Halifax NS, Saint John NB, Calgary AB, Vancouver BC, Regina SK, London ON, Toronto ON and Montreal QC. Over the course of these twelve (12) months, NEB staff consulted with more than 150 professionals representing underground utilities, landowners, municipalities and pipeline companies on the content of the Conceptual Draft.

In addition to the focus meetings, NEB staff held public meetings or "open houses" where interested individuals were provided with the opportunity to discuss the content of the proposed Regulations. Open houses were held in New Glasgow NS, Hardisty AB, Regina SK, Kingston ON and Vaudreuil QC. More than 250 persons attended these meetings to learn about the proposed Regulations and to discuss the content of the Conceptual Draft.

Written comments on the Conceptual Draft were provided by a number of interested parties including pipeline companies and industry associations, One-Call organizations, various municipal and provincial authorities and contractor associations.

The *Draft Guidance Notes for the National Energy Board Damage Prevention Regulations* (the Guidance Notes) represent the culmination of the past year of consultation. It is substantially different from the Conceptual Draft both in content and structure and incorporates many of the suggestions and comments heard throughout the consultation process.

The document has been structured in such a way that the text of the Regulations is provided followed by the guidance pertinent to the section(s) of the Regulations cited. Guidance notes do not contain mandatory requirements unless they repeat or paraphrase the requirements of the Regulations. They are intended to provide additional information that will assist readers in understanding their regulatory obligations and the NEB's expectations.

To assist in comprehension and understanding, the document includes numerous explanatory text boxes under the heading "Did You Know". These boxes are used to convey important information that may assist readers in making sound decisions regarding compliance and safety.

The DPR are unique among the regulations administered by the Board. They impose duties on anyone who undertakes or proposes to undertake an activity having the potential to damage a pipeline. As such, the Board is committed to a thorough and ongoing consultation process with interested stakeholders.

The authority to make the Regulations is provided within sections 48, 108 and 112 of the *National Energy Board Act* (the Act). These sections of the Act are provided for reference in Part 3 of these Guidance Notes.

The Board intends to meet with interested parties to discuss the content of this document between January and March 2004. Written comments are invited until 31 March 2004.

If you or your organization are interested in meeting with NEB representatives to discuss the content of this document.

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TABLE OF CONTENTS

1 **PRINCIPLES** 2

2 **COMPLIANCE** 2

3 **LEGISLATIVE AUTHORITY** 3

4 **INTERPRETATION** 5
4.1 Regulatory text 5
4.2 Guidance Notes 6

5 **APPLICATION** 7
5.1 Regulatory Text 7
5.2 Guidance Notes 7

6 **GENERAL** 10
6.1 Regulatory Text 10
6.2 Guidance Notes 10

7 **PERMISSIONS** 15
7.1 Regulatory Text 15
7.2 Guidance Notes 15

8 **CROSSINGS** 16
8.1 Regulatory Text 16
8.2 Guidance Notes 16

9 **NOTIFICATION** 19
9.1 Regulatory Text 19
9.2 Guidance Notes 19

10 **LOCATES** 21
10.1 Regulatory Text 21
10.2 Guidance Notes 22

11 **CONTROL OF ACTIVITIES** 24
11.1 Regulatory Text 24
11.2 Guidance Notes 24

12 **REPORTING** 26
12.1 Regulatory Text 26
12.2 Guidance Notes 26

13 **AUDIT** 28
13.1 Regulatory Text 28
13.2 Guidance Notes 28

14 **RECORDS** 29
14.1 Regulatory Text 29
14.2 Guidance Notes 29

15 **IN FORCE** 29
15.1 Proposed Regulation 29

APPENDIX 1
Penalties 30

APPENDIX 2
Application for Leave - Section 81 31

1 PRINCIPLES

These Regulations and Guidance Notes are based on the following statement of purpose and three supporting principles:

STATEMENT OF PURPOSE

The National Energy Board regulates activities on or adjacent to pipeline rights of way under Board jurisdiction in the interests of the protection of property and the environment and the safety of the public and of the pipeline company's employees.

SUPPORTING PRINCIPLES

1. The Board respects the rights of owners or users of property which contain or are adjacent to rights of way.
2. The Board respects the rights of companies in the management of affairs within their rights of way.
3. The Board promotes compliance through education, cooperation and enforcement.

2 COMPLIANCE

The DPR reflect the Board's continued advancement in the development and implementation of goal-oriented regulations. As such, a key component of these Regulations is the ability to assess compliance through audits of pipeline company records, practices and procedures. The onus is on individual companies to be able to provide sufficient information to demonstrate compliance. Where an audit reveals a non-compliance or a non-conformance, the pipeline company must take corrective action.

In addition to audits, this document includes a draft schedule of penalties (fines) for dangerous non-compliance. The Board intends to enact these fines pursuant to the federal *Contraventions Regulations* under the *Contraventions Act*. Appendix I of this document provides details of the fines under consideration.

The Board is also considering an annual publication providing the details of fines issued for contravention of these Regulations within a predetermined reporting period (e.g. fines issued in a calendar year). The information published would include a description of the offence, the amount of the fine and the name of the person or pipeline company to whom the fine was issued. This publication would be publicly available from the Board's internet Website.

DID YOU KNOW?

ALWAYS call before you dig.

Regardless of where you live or what regulations may apply, you should always call One-Call or individual companies to ensure your work will not interfere with buried facilities.

3 LEGISLATIVE AUTHORITY

The Regulations and Guidance Notes are based upon and will be promulgated pursuant to the following sections of the Act:

SECTION 48

48.(1) To promote safety of operation of a pipeline, the Board may order the company to repair, reconstruct or alter part of the pipeline and may direct that, until the work is done, that part of the pipeline not be used or be used in accordance with such terms and conditions as the Board may specify.

(2) The Board may, with the approval of the Governor in Council, make regulations governing the design, construction, operation and abandonment of a pipeline and providing for the protection of property and the environment and the safety of the public and of the company's employees in the construction, operation and abandonment of a pipeline.

(2.1) The Board may make orders exempting companies from any or all of the provisions of the regulations made under subsection (2).

(2.2) In any order made under subsection (2.1), the Board may impose such terms and conditions as it considers proper.

(3) Every person who contravenes a regulation made under subsection (2) is guilty of an offence punishable on summary conviction.

SECTION 108

108.(1) In this section and sections 110 and 111, "appropriate authority" means

(a) with respect to a navigable water, the Minister of Transport, and
(b) [Repealed, 1996, c. 10, s. 244]
(c) with respect to any other utility, the Board;

"utility" means a navigable water, a highway, an irrigation ditch, a publicly owned or operated drainage system, sewer or dike, an underground telegraph or telephone line or a line for the transmission of hydrocarbons, electricity or any other substance.

(2) The pipeline of a company may, if leave is first obtained from the appropriate authority, be carried across any utility and for that purpose may be constructed on, along or under any such utility.

(3) On an application for leave under this section, a company shall submit to the appropriate authority such plans and profiles and other information as the appropriate authority may require.

(4) The appropriate authority may, by order, grant the application in whole or in part and on such terms and conditions as the appropriate authority considers proper.

(5) The appropriate authority may provide that leave under this section is not necessary if the pipeline is constructed in accordance with the orders, regulations, plans and specifications made, adopted or approved by the appropriate authority for those purposes.

(5.1) The Board may make orders or regulations prescribing the circumstances in which or conditions under which leave under this section is not necessary to carry a pipeline across a utility other than a navigable water or a railway.

(6) The appropriate authority may grant leave under this section after construction of the proposed work has commenced if the appropriate authority is satisfied that the work was urgently required and, prior to the commencement of construction, the appropriate authority was notified of the company's intention to proceed with the proposed work.

SECTION 112

112.(1) Subject to subsection (5), no person shall, unless leave is first obtained from the Board, construct a facility across, on, along or under a pipeline or excavate using power-operated equipment or explosives within thirty (30) metres of a pipeline.

(2) Subject to subsection (5), no person shall operate a vehicle or mobile equipment across a pipeline unless leave is first obtained from the company or the vehicle or mobile equipment is operated within the traveled portion of a highway or public road.

(3) The Board may, on granting an application for leave under this section, impose such terms and conditions as it considers proper.

(4) The Board may direct the owner of a facility constructed across, on, along or under a pipeline in contravention of this Act or the Board's orders or regulations to do such things as the Board considers necessary for the safety of the pipeline and may, where the Board considers that the facility may impair the safe operation of the pipeline, direct the owner to reconstruct, alter or remove the facility.

(5) The Board may make orders or regulations governing

(a) the design, construction, operation and abandonment of facilities constructed across, on, along or under pipelines;

(b) the measures to be taken by any person in relation to

(i) the construction of facilities across, on, along or under pipelines,

(ii) the construction of pipelines across, on, along or under facilities, other than railways, and

(iii) excavations within thirty (30) metres of a pipeline; and

(c) the circumstances in which or conditions under which leave under this section is not necessary.

(5.1) Without limiting the generality of paragraph (5)(c), orders or regulations made under that paragraph may provide for the prohibiting of excavations in an area situated in the vicinity of a pipeline, which area may extend beyond thirty (30) metres of the pipeline, during the period that starts when a request is made to a pipeline company to locate its pipeline and ends

(a) at the end of the third working day after the day on which the request is made; or

(b) at any later time that is agreed to between the pipeline company and the person making the request.

(6) The Board may, by order made on any terms and conditions that the Board considers appropriate, exempt any person from the application of an order or regulation made under subsection (5).

(7) *The provisions of sections 49 to 51.3 relating to inspection officers apply for the purpose of ensuring compliance with orders and regulations made under subsection (5).*

4 INTERPRETATION

4.1 REGULATORY TEXT

1. *The definitions in this section apply in these Regulations.*

"Act" means the National Energy Board Act;

"commodity pipeline" is a pipeline that transmits a substance other than oil or gas;

"facility" includes pipelines, telecommunications cables and utilities;

"ground disturbance" means a mechanical excavation or an explosive detonation;

"locate" means the activities involved in establishing the position of a buried facility;

"locate ticket" is a One-Call record of a request to have a facility owner locate its buried facilities at a specific location or locations;

"locate report" is a record of a locate;

"locator" means a person who has been qualified by the pipeline company to perform a locate;

"marking" means the activities involved in visibly identifying the location of buried facilities through means of temporary flags, spray paint or other appropriate means;

"One-Call" means an association or other organization of operators of subsurface installations which coordinates requests for locates and provides advance warning of ground disturbances or other work close to existing subsurface installations, for the purpose of protecting those installations from damage;

"onshore pipeline" means an onshore pipeline as defined within the Onshore Pipeline Regulations, 1999, (SOR/99-294) as amended from time to time;

"pipeline company" means the company responsible for the operation of the pipeline or its designate;

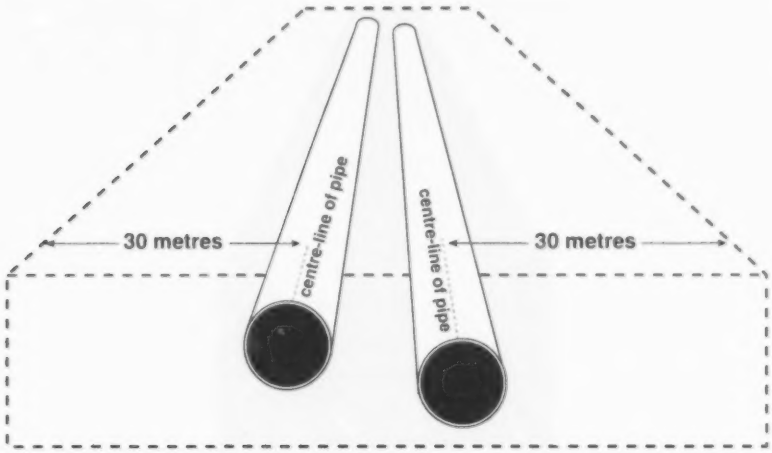
"safety zone" means an area extending thirty (30) metres perpendicularly from the centreline of the pipe.

"working day" means Monday, Tuesday, Wednesday, Thursday or Friday excluding statutory holidays.

4.2 GUIDANCE NOTES

The term "safety zone" has now been defined within the Regulations. The safety zone is a strip of land that extends thirty (30) metres in both directions from the centreline of a line of pipe. Figure 1 provides a graphical depiction of the safety zone.

Figure 1 – Safety Zone



The term "onshore pipeline" is specifically defined within the *Onshore Pipeline Regulations, 1999* (OPR), as amended from time to time, to clarify that the OPR applies only to hydrocarbon pipelines in onshore areas. Onshore areas are generally accepted to be pipelines installed on land above the ordinary high water mark of major water bodies. Additional terms commonly used in damage prevention include:

easement An agreement under which a pipeline company acquires the right to use the land for the pipeline. It is a written contract that sets out the rights of the pipeline company and the rights of the landowner for the use of the right of way.

encroachment Any violation of the terms or conditions of the easement agreement. Typically, encroachment is applied to the construction of buildings, fences or other structures within the right of way without the prior approval of the pipeline company.

right of way The strip of land for which the pipeline company has obtained rights for the construction and operation of the pipeline.

5 APPLICATION

5.1 REGULATORY TEXT

APPLICATION

2. These Regulations apply to

(a) onshore pipelines and commodity pipelines;

(b) persons planning or undertaking any activity having the potential to damage an onshore pipeline or a commodity pipeline; and

(c) persons planning or undertaking any ground disturbance within the safety zone.

3. The pipeline company may limit the extent of the safety zone to the property upon which the pipeline is located at its option.

5.2 GUIDANCE NOTES

Enacting Authority

Section 2 - Enacted under subsection 112(5) of the Act.
Section 3 - Enacted under subsection 112(5) of the Act.

The Regulations apply to anyone who proposes or undertakes an activity which could reasonably be expected to result in damage to a pipeline or who proposes or undertakes a ground disturbance within the safety zone.

Damage to pipelines may occur through a number of ways including:

(a) direct contact with the pipe during excavation activities;

(b) the imposition of incremental stress on the pipe through the application of surface loads;

(c) vibration or acceleration loads resulting from explosive detonations or other means;

(d) subsidence or collapse of excavations adjacent to the pipeline; or

(e) activities and events where the pipe's existing stress regime is altered.

DID YOU KNOW?

The content of an easement agreement does not supersede these Regulations. Where these Regulations impose duties or requirements at variance or in addition to the content of easement agreements, these Regulations apply.

The Regulations apply to situations where damage to pipelines is possible including:

(a) the construction of any highway, private road, railway, parking lot, irrigation ditch, drain, drainage system (including agricultural tile drainage), sewer, dike, telegraph, telephone line or line for the transmission of hydrocarbons, power or any other substance that is or is to be carried across, along, upon or under any pipeline;

(b) ground disturbances within the safety zone;

(c) activities having the potential to damage a pipeline irrespective of the distance between the activity and the pipeline; and

(d) the operation of vehicles or mobile equipment over a pipeline unless they are operated within the traveled portion of a highway or public road.

The development of an exhaustive list of specific activities having the potential to damage a pipeline is impossible. The following list includes some activities and events which may interfere with the continued safe operation of a pipeline.

(a) excavating;

(b) digging;

(c) trenching;

(d) plowing for the installation of tile drainage, cables, pipes or other subsurface structures,

(e) drilling;

(f) tunnelling;

(g) auguring;

(h) backfilling;

(i) blasting;

(j) topsoil stripping;

(k) land levelling;

(l) peat removing;

(m) quarrying;

(n) clearing and grading;

DID YOU KNOW?

The stress at which a pipeline operates can be affected by factors such as surface loads applied by vehicles or equipment moving over the top of a pipeline.

The stress a pipeline operates under is determined by numerous factors including the pressure the pipe operates at, the strength and the wall thickness of the pipe, the soil type and density, moisture content and surface loads. Changes to any of these factors may result in damage to the pipe.

If you are planning any activity near a pipeline, you should contact the pipeline company.

(o) movement of vehicles or equipment over the top a pipeline;

(p) placing excess cover or increasing surface loading over pipelines;

(q) tampering with pipeline markers which could lead to confusion about a pipelines proximity;

(r) chemical spills or leaks which could damage the pipe coating;

(s) soil subsidence;

(t) fencing;

(u) deep tillage or sub-soiling; and

(v) earth movement.

Section 81 does not provide the Board with the ability to make regulations and as such, prospecting for mines or minerals lying under a pipeline or any of the works connected therewith is not governed by the Regulations. Appendix 2 of these Guidance Notes provides information on how to apply to the Board under section 81 of the Act.

Section 3 of the Regulations is intended to provide companies with the ability to reduce the areal extent of the safety zone in situations where it impinges on adjacent property owners and provides no additional safety. For example, pipeline corridors may exist within an urban setting where the corridor is separated from adjacent properties by a fence or similar structures which clearly indicate the property line. In these instances, having an adjacent landowner notify the pipeline company of their plans for a ground disturbance within their property may be unnecessary. Section 3 provides companies with the ability to tailor the safety zone to practical circumstances in these situations.

DID YOU KNOW?

Seismic exploration, quarry and gravel operations within forty (40) metres of a pipeline require the approval of the Board.

Activities associated with prospecting and mining near pipelines require the approval of the NEB when those activities take place within forty (40) metres of a NEB regulated pipeline (see section 81 of the Act).

Excavations or explosive detonations within the safety zone must comply with these Regulations in addition to any approval under section 81.

6 GENERAL

6.1 REGULATORY TEXT

GENERAL

4. *Pipeline companies shall develop, implement and maintain a damage prevention program.*

5. *Pipeline companies shall be members of One-Call where they own or operate facilities within areas where such organizations exist.*

6.2 GUIDANCE NOTES

Enacting Authority

Section 4 - Enacted under subsection 48(2) of the Act.
Section 5 - Enacted under subsection 48(2) of the Act.

Damage Prevention Programs

Damage prevention programs are intended to reduce the frequency of preventable damage and should include elements pertaining to:

(a) awareness;

(b) continuing education and liaison;

(c) monitoring and surveillance; and

(d) ongoing assessment of land use and ownership.

Awareness

Awareness programs should provide the following information:

(a) One-Call information;

(b) description of the safety zone;

(c) descriptions of permissible and non-permissible activities within the safety zone;

(d) content of easement agreements pertaining to the continued safe operation of the pipeline (e.g. prohibited land uses and allowances for structures);

DID YOU KNOW?

Damage prevention programs and initiatives are closely tied to requirements found within the OPR. Specifically, sections 32 through 35 of the OPR pertain to emergency preparedness and response, continuing education and liaison. In addition, section 39 of the OPR requires companies to have a program for the monitoring and surveillance of the pipeline.

(e) information on what activities have the potential to damage the pipeline;

(f) excavation requirements;

(g) regulatory requirements and the consequences of non-compliance;

(h) illustrations and descriptions of pipeline markers;

(i) guidance on what sorts of activities and events should be reported to the pipeline company;

(j) information regarding emergency response and emergency contacts; and

(k) the location and physical attributes (size, material, content, pressure, etc.) of the pipeline.

Different audiences should be considered when developing and implementing awareness programs and may include:

(a) the public living or working near a pipeline including:
  (i) landowners;
  (ii) residents or businesses on or adjacent to the pipeline rights of way;
  (iii) utility companies and railroads; and
  (iv) homeowner organizations and neighbourhood associations;

(b) other pipeline companies;

(c) institutions such as schools, churches, recreation centres, hospitals, prisons or other institutions along the pipeline route;

(d) organizations with an interest in damage prevention;

(e) government agencies, media outlets and emergency response representatives including:
  (i) provincial departments or agencies with responsibilities respecting energy, safety, transportation, environment or health;
  (ii) municipal governments and planning authorities;
  (iii) emergency responders (police, fire, ambulance);
  (iv) hazardous material response teams;
  (v) disaster recovery or emergency measures authorities; and
  (vi) local media; and

(f) excavators and contractors including:
  (i) private contractors;
  (ii) seismic or geophysical contractors;
  (iii) industry associations; and
  (iv) municipal, provincial and federal public works departments.

The frequency of consultation should be sufficient to ensure that the audience is aware of the presence of the pipeline and the content of the awareness program. The selection of the audience and the frequency of consultation may be based on:

(a) risks associated with pipeline damage;

(b) population density;

(c) history of prior incidents;

(d) other factors that may be of public interest;

(e) property ownership changes;

(f) planning and development; and

(g) changing land use.

The frequency of contact with audiences (aboriginals, landowners/tenants, affected parties, interested parties) should not exceed thirty-six (36) months unless a longer period can be demonstrated to be appropriate.

The awareness program should include provisions for quick communication of essential information to audiences when changes to the pipeline or its operation result in changes to the content of the awareness program.

The content of awareness programs should be conveyed effectively to each target audience on an ongoing basis. Distribution methods could include:

(a) door to door contact;

(b) brochures;

(c) mailings (with response cards);

(d) mementos;

(e) presentations at venues such as local meetings or town halls;

(f) internet;

(g) media advertisements; and

(h) trade shows or exhibits.

The effectiveness of awareness programs should be periodically evaluated as part of the audit program set out within Part 13 of these Guidance Notes.

Awareness relies heavily on the use of highly visible markings. Pipeline marker signs indicate that a pipeline is located nearby and provide important information on emergency response and ownership. Signs on facilities and vehicles also increase public awareness of pipelines.

Mandatory pipeline signage requirements for pipeline companies are provided within clause 10 of the standard CSA Z662 *Oil and Gas Pipeline Systems* (CSA Z662).

A combination of above ground and below ground markers should be considered for the identification of underground facilities.

Above ground markers should:

(a) be highly visible where the proximity to development or other activities having a high potential to result in damage to the pipeline are occurring;

(b) comply with the requirements of CSA Z662;

(c) be placed within sight of each other where practicable;

(d) provide the One-Call number where practicable; and

(e) be in the language or languages appropriate for the region.

Consideration should be given to the installation of below grade markers such as high visibility marker tape at locations where it can reasonably be expected that the pipe will be exposed at some future date (e.g. within road allowances, utility rights of way, at crossings, etc.).

Continuing Education and Liaison

Pipeline companies are encouraged to become members of damage prevention organizations where they exist along the length of their right of way.

Pipeline companies should be actively involved in the planning and subdivision approval processes of municipalities in which they operate a pipeline. Where appropriate, pipeline companies should provide submissions to planning authorities outlining their requirements and concerns as well as suggestions on land use whenever proposed land use change could affect the continued safe operation of their pipeline.

Submissions to planning authorities from pipeline companies should:

(a) clearly indicate that the land contains a federally regulated pipeline under the jurisdiction of the NEB;

(b) provide direction on easement conditions and the requirements of the Regulations;

(c) offer alternatives where the proposal impacts their pipelines;

(d) provide contact information for the pipeline company; and

(e) provide information on the physical characteristics of the pipeline (product, pressure, size, etc.).

Companies responding to development proposals should consider the incremental risks associated with the proposal

DID YOU KNOW?

Signs do not mark the exact location of the pipe!

It is against the law to tamper with a pipeline sign.

Signs often act as the only surface indication that a pipeline is buried in that area. Tampering with a pipeline sign reduces the likelihood that persons working in that area will be aware that a pipeline is nearby.

and provide any current or future requirements they may have to ensure the continued and safe operation of their pipeline.

Monitoring & Surveillance

Pipeline companies must establish a program for monitoring and surveillance of the right of way. This program should be designed to detect activities having the potential to damage a pipeline which occur on or near existing pipelines.

The frequency of monitoring and surveillance should be greater in areas of higher risk or elevated consequence (e.g. urban areas, population centres, high subsurface activity levels).

One-Call

NEB regulated pipeline companies must be members of One-Call in areas where One-Call exists.

The following One-Call's are active within Canada:

Name	Area Covered	Phone Number	Website
Alberta One-Call	Alberta	1-800-663-9228	www.albertaonecall.com
BC One-Call	British Columbia	1-800-474-6886	www.bconecall.bc.ca
Sask 1st Call	Saskatchewan	1-866-828-4888	www.sask1stcall.com
Ontario One-Call System	Ontario	1-800-242-3447	www.on1.call.com
Info-Excavation	Quebec	1-800-474-6886	www.info-ex.com

Anyone undertaking an activity having the potential to damage a pipeline in areas where One-Call is active must contact One-Call to arrange to have a federally regulated pipeline located.

Where One-Call does not exist, persons requiring a locate must contact the pipeline company directly. Contact information for pipeline companies regulated by the NEB can be found within the National Energy Board publication *Excavation and Construction Near Pipelines*.

DID YOU KNOW?

Contacting One-Call does not mean that all underground facilities have been located.

One-Call is only responsible for ensuring that their member companies are notified of a request for a locate. Some underground utilities are not members of One-Call. It is the responsibility of the person undertaking the activity having the potential to damage the pipeline to ensure that underground facility owners who are not members of One-Call and who may be affected by the planned activities are contacted.

7 PERMISSIONS

7.1 REGULATORY TEXT

PERMISSIONS

6. *Leave of the Board pursuant to subsection 112(1) of the Act is not required for ground disturbances outside of the safety zone.*

7. *Leave of the Board under subsection 112(1) of the Act is not required for ground disturbances within the safety zone provided the pipeline company has been notified as set out in section 12 and the pipeline company has responded to that notification as set out in section 13.*

7.2 GUIDANCE NOTES

Enacting Authority

Section 6 - Enacted under subsection 112(5) of the Act.
Section 7 - Enacted under subsection 112(5) of the Act.

If a ground disturbance is planned or undertaken within the safety zone, the pipeline company must be notified and provided with the opportunity to locate their pipeline and take whatever steps are necessary to ensure that their pipeline is protected from damage.

DID YOU KNOW?

Sections 108 and 112 of the Act permit the Board to make regulations setting out circumstances when permission for certain activities is NOT required.

8 CROSSINGS

8.1 REGULATORY TEXT

CROSSINGS

Pipelines Crossing Utilities

8.(1) Leave of the Board is not required for the construction of a pipeline carried across, on, along or under a utility where the terms and conditions for the construction have been set out in a written agreement between the pipeline company and the owner of the utility.

8.(2) The pipeline company may apply to the Board for leave under section 108 of the Act when an agreement as described within subsection (1) can not be obtained.

Facilities Crossing Pipelines

9.(1) Leave of the Board is not required to construct a facility across, on, along or under a pipeline where an agreement establishing the terms and conditions for the construction have been set out in a written agreement between the pipeline company and the proponent of the facility.

9.(2) Pipeline companies shall approve or deny requests by proponents seeking permission to construct a facility across, on, along or under a pipeline within ten (10) working days of receipt of the request.

9.(3) The ten (10) working day period set out in subsection 9(2) can be extended by mutual agreement of the proponent and the pipeline company.

9.(4) When permission to construct a facility across, on, along or under a pipeline is denied by the pipeline company, the pipeline company will immediately provide the Board and the proponent with the reasons for the denial and shall inform the proponent of their right to seek leave from the Board.

Vehicles and Mobile Equipment Crossing Pipelines

10. Where the pipeline company has determined that the load imposed by vehicles or mobile equipment operating above the pipeline outside of the traveled portion of a highway or public road will not damage the pipeline, leave of the pipeline company is not required.

8.2 GUIDANCE NOTES

Enacting Authority

Section 8 - Enacted under subsection 108(5) of the Act.
Section 9 - Enacted under subsection 112(5) of the Act.
Section 10 - Enacted under subsection 112(5) of the Act.

This guidance pertains to situations where:

(a) pipeline companies are seeking permission to construct their pipeline across a utility (Permission to Cross a Utility);

(b) persons are seeking permission to construct a facility across a pipeline (Permission to Cross a Pipeline); and

(c) vehicles or mobile equipment are being moved over top a pipeline (Vehicles and Mobile Equipment).

Permission to Cross a Utility

Leave of the Board under section 108 of the Act is not required where the pipeline company and the utility owner can agree on the terms and conditions associated with a proposed crossing.

Where no agreement can be reached, the pipeline company may apply to the Board for leave.

Permission to Cross A Pipeline

Pipeline companies are responsible for considering and processing all requests by persons wishing to construct a facility across, on, along or under a pipeline. The pipeline company must respond to these requests within ten (10) working days of their receipt. They may either deny a request for a crossing or approve a crossing with or without conditions.

Where persons requesting permission to cross a pipeline and the pipeline company can not agree on the terms and conditions required for the approval of a crossing, they may seek relief from the Board by applying for leave under subsection 112(1) of the Act.

Agreements between pipeline companies and proponents of facilities to be constructed across, on, along or under a pipeline should include:

(a) an acknowledgement that the proponent of the facilities accepts the conditions set out in the agreement and that the work will be carried out in accordance with the technical details set out in the proponents request for permission that have been accepted by the pipeline company;

(b) a provision that the work must be completed within two years after the date the agreement is signed by the pipeline company or within a period otherwise agreed on by the pipeline company and the proponent;

(c) requirements for locates and exposure of the pipe;

(d) contact information and notification requirements for the work and in case of emergency;

(e) inspection requirements for the pipeline company;

(f) indemnification as appropriate;

(g) methods and procedures to be taken to protect the pipe from damage during installation of the facility;

(h) requirements for the notification of the pipeline company of any contact with the pipeline company's pipe or its coating;

(i) maintenance provisions and access requirements for the facility; and

(j) requirements for the abandonment of the facility.

Vehicles and Mobile Equipment

The movement of vehicles and mobile equipment over a pipeline increases the stresses acting on the pipe and, in some cases, may result in damage to the pipeline. The actual stress changes can only be assessed through engineering calculations which take into account factors such as the depth of cover and soil type, the operating stresses experienced by the pipe, the pipe materials, the bearing pressure imposed by the static and dynamic loads applied, and other factors.

Prior to moving any vehicles or mobile equipment over a pipeline, the pipeline company must be contacted and provided with the opportunity to ensure that the movement will not result in damage to the pipe. If necessary, the pipeline company may request that the location of the crossing be moved or reinforced in some manner to prevent damage.

The movement of agricultural equipment over pipelines is subject to the approval of the pipeline company.

Some pipeline companies may provide allowances for "normal farming activities" over their pipelines within the terms of the existing easement agreements or through other agreements. In these instances, these agreements act as approval for "normal farming activities" and no further approval from the pipeline company is required. The pipeline company should be contacted for additional information regarding the movement of vehicles or equipment over the pipeline.

"Normal farming activities" as defined by pipeline companies may include ploughing, cultivation, planting, harvesting, and similar operations routine to most farms utilizing standard mobile equipment, but excludes chisel ploughing, sub-soiling, or ripping more than forty-five (45) centimetres in depth, drain tile excavating, terracing, digging or driving a post in a new location other than replacing a post while repairing a fence in its existing location, and similar operations.

DID YOU KNOW?

Section 112(2) of the Act requires that persons operating vehicles or mobile equipment over the pipeline obtain the pipeline company's approval prior to doing so.

The intent of this requirement is to prevent damage to the pipeline that could result by the imposition of surface loads. The determination of surface loading effects on pipelines requires the application of engineering principles and knowledge of the pipeline stress conditions.

9 NOTIFICATION

9.1 REGULATORY TEXT

NOTIFICATION

11.(1) Persons undertaking excavations outside of the safety zone which have the potential to damage a pipeline must notify the pipeline company a minimum of three (3) working days prior to commencing the activities.

11.(2) The pipeline company shall take steps to ensure the continued safe operation of the pipeline within three (3) working days of having been notified as set out in subsection (1).

11.(3) The three (3) working day period set out in subsections 11.(1) and 11.(2) can be extended by mutual agreement of all affected parties.

12. Persons planning a ground disturbance within the safety zone must notify the pipeline company a minimum of three (3) working days prior to commencing the ground disturbance.

9.2 GUIDANCE NOTES

Enacting Authority

Section 11 - Enacted under subsection 112(5.1) of the Act.
Section 12 - Enacted under subsection 112(5) of the Act.

The pipeline company must be notified at least three (3) working days prior to undertaking any activity which could result in damage to a pipeline.

No ground disturbance may take place within the safety zone until the pipeline company has completed the locate or determined that there is no need for a locate.

Examples of activities having the potential to damage a pipeline are provided in part 5.2 of these Guidance Notes. The following checklist may also be beneficial in determining if the pipeline company must be notified:

Description	Pipeline Company Notification
Shallow exaction (depth less than five (5) metres) outside of the safety zone	Not Required
Deep exaction (depth greater than or equal to five (5) metres) outside of the safety zone	Required
Ground disturbance within the safety zone	Required
Movement of vehicles or equipment in a field over a pipeline without prior approval of the pipeline company	Required

Once notified, pipeline companies will assess the impact of the proposed activities and take the necessary steps to ensure safety. These steps may include:

(a) requirements for the construction of specialized crossings or the provision of crossings for the movement of vehicles or mobile equipment over pipelines;

(b) use of monitoring devices such as accelerometers to measure the effects of vibration loading on the pipeline; or

(c) requiring or providing shoring for excavations where subsidence could damage the pipeline.

No activity having the potential to damage a pipeline should proceed until such time as the continued safe operation of the pipeline can be assured. The proponent of the excavation must comply with terms of the easement agreement for activities within the right of way.

DID YOU KNOW?

10 STEP SAFETY CHECKLIST

1. **Plan your activity — Identify the precise location of your work; check records for evidence of pipeline easements or other buried utilities.**
2. **Visit the site and look for signs of a nearby pipeline or other buried utilities.**
3. **Call the pipeline company and seek their approval for your plans.**
4. **Obtain a copy of the pipeline company's detailed crossing guidelines.**
5. **Call your provincial One-Call where applicable.**
6. **Be on site when the pipe is located and know the meaning of the pipeline markers.**
7. **Hand expose the pipe prior to mechanical excavation within 5 metres of the pipe.**
8. **Notify the pipeline company one working day before backfilling over the pipe.**
9. **Immediately notify the pipeline company if you have come in to contact with the pipe or its coating.**
10. **Always follow the instructions of a pipeline company representative.**

10 LOCATES

10.1 REGULATORY TEXT

LOCATES

13.(1) Within three (3) working days after notification as set out in section 1.2, the pipeline company shall

(a) determine if the ground disturbance has the potential to damage the pipeline;

(b) locate the pipeline company's pipe and other facilities if required; and

(c) inform the person responsible for the activities of all information pertinent to the prevention of damage to the pipe and other facilities.

13.(2) The period of time between the notification and activities set out in subsection (1) may be any period of time provided the persons making the notification and the pipeline company agree.

14. The pipeline company shall develop, implement and maintain standards for locates including

(a) the required qualifications and competencies for locators;

(b) the type and quantity of surface markings to be used;

(c) the procedures for establishing the depth of cover over the pipe;

(d) the form of identification to be provided to locators; and

(e) the form and content of communications between the locator and the party which requested the locate.

15. The pipeline company shall create and maintain records of locators who are qualified to perform locates on behalf of the pipeline company.

16. Unless otherwise agreed to by the pipeline company, the locate report shall be valid for a period of thirty (30) calendar days after the date upon which the locate ticket was issued unless the surface markings are disturbed to the extent that they no longer provide a valid indication of the location of the pipe and other facilities.

17. Markings placed by the locator shall accurately identify the horizontal alignment of the pipe or other facilities within plus or minus one (± 1.0) metres.

10.2 GUIDANCE NOTES

Enacting Authority

Section 13 - Enacted under subsection 112(5) of the Act.
Section 14 - Enacted under subsection 48(2) of the Act.
Section 15 - Enacted under subsection 48(2) of the Act.
Section 16 - Enacted under subsection 48(2) of the Act.
Section 17 - Enacted under su' section 48(2) of the Act.

Pipe and facilities owned by the pipeline company should be located at no cost to the person requesting the locate.

Locators

Locators must be adequately trained in order to carry out their work. Pipeline companies should develop and maintain training programs and minimum qualification and competency requirements for locators (additional guidance on the content and requirement of training programs for pipeline company employees can be found under section 46 of the OPR).

At a minimum, locators should:

(a) understand plans showing subsurface utilities;

(b) possess a basic understanding of construction standards and practices;

(c) be competent in the use of equipment they are likely to use;

(d) understand the principles of how electronic locators work;

(e) understand the varied relationships between facility owners, excavators and contractors;

(f) complete periodic testing to verify their knowledge and abilities; and

(g) carry identification indicating they have been trained and are qualified to locate specific types of facilities on behalf of the owner(s) of the facilities.

Pipeline company training records shall identify persons qualified to locate their facilities.

Locates

Companies shall identify their facilities using combinations of colour coded surface marks, temporary stakes or flagging. Where possible, markings should indicate the name, initials or logo of the pipeline company that owns or operates the line.

Locate reports are considered valid for a period of thirty (30) days after a locate has been completed or until such time as the markings are no longer legible and do not provide clear direction on facility location (whichever occurs sooner).

If the surface over the pipe or facilities is to be removed or excavated, supplemental offset markings may be used to clearly indicate the true location of the facility.

The colours used to identify underground facilities should be consistent with the *Canadian Electrical Code* (CSA C22.3):

RED	Electric Power Lines, Cables, Conduit and Lighting Cables
YELLOW	Gas, Oil, Steam, Petroleum or Gaseous Materials
ORANGE	Communication, Alarm or Signal Lines, Cables or Conduit
BLUE	Potable Water
GREEN	Sewers and Drain Lines
PURPLE	Reclaimed Water, Irrigation and Slurry Lines
PINK	Temporary Survey Marking
WHITE	Proposed Ground Disturbance

Prior to undertaking any ground disturbance having the potential to damage a pipeline, the person proposing to perform the ground disturbance should mark out the location or boundary of all proposed activities using markings which are visible and which may be maintained until such time as the ground disturbance is complete. Activities associated with the ground disturbance may not proceed beyond the limits of the markings.

Accuracy of markings shall be within one (1.0) metre measured horizontally from the centreline of the actual pipe or facility.

Locators should meet with the excavator to communicate the meaning of markings and the information on the locate report. In addition, the excavator must be made aware of the legal requirements arising from the Regulations.

11 CONTROL OF ACTIVITIES

11.1 REGULATORY TEXT

CONTROL OF ACTIVITIES

18. The pipeline company or its designated representative shall immediately halt any activities deemed to be contrary to these Regulations and shall use reasonable efforts to halt activities beyond the scope of these Regulations which pose an immediate danger to their facilities.

19. The pipeline company or its designated representative shall

(a) be present during mechanical excavation within five (5) metres of the centerline of a buried pipe which is part of the pipeline;

(b) be present during backfilling of excavations where its facilities have been exposed; and

(c) make a record of all activities as described in subsections (a) and (b).

20. No mechanical excavating equipment may be operated within five (5) metres of the centerline of a buried pipe unless the location of the pipe has been positively determined by exposure or equivalent means.

11.2 GUIDANCE NOTES

Enacting Authority

Section 18 - Enacted under subsection 48(2) of the Act.
Section 19 - Enacted under subsection 48(2) of the Act.
Section 20 - Enacted under subsection 48(2) of the Act.

An activity which could reasonably be expected to interfere with the continued safe operation of a pipeline should not take place until the pipeline company has been notified and measures have been taken to ensure the potential and real impacts associated with the activity have been appropriately mitigated.

In most cases, an application, notification or approval is not required for ground disturbances outside of the safety zone provided these activities do not have the potential to damage a federally regulated pipeline. However, if the ground disturbance could result in damage to the pipeline, the activity should not take place until measures have been taken to protect the pipeline.

The location of the pipe must be positively determined prior to permitting any mechanical excavation within five (5) metres of the centerline of the pipe. Where practical, this means the pipe will be exposed using hand digging techniques or non-destructive excavation techniques such as hydraulically assisted excavation (hydrovac).

Where it is impractical to expose the pipe because of excessive depth, frozen ground or other reasons, alternative methods should be used to ensure that the proposed ground disturbance will not interfere with the continued safe operation of the pipeline. This may include the excavation of a slot trench (an excavation proving the proposed installation will not interfere with the pipeline) using non-destructive methods for the width of the right of way or other techniques which provide equivalent levels of safety.

No mechanical excavating equipment should be operated within five (5) metres of the centerline of the pipe unless it is directed by a competent person. The pipeline company must have a representative present whenever mechanical excavation takes place within five (5) metres of the centerline of the pipe. This person has the authority to stop all activities deemed contrary to the Regulations or any agreement in place specific to the undertaking.

Where a ground disturbance parallels a pipe, the location of the pipe should be positively determined by the person proposing or undertaking the ground disturbance (using a method or methods approved by the pipeline company) at sufficient intervals to ensure that the pipe will not be damaged.

Pipeline companies should determine the necessary requirements for the protection of their facilities during any ground disturbance within the right of way. These requirements should include direction on required supports for exposed facilities. Persons undertaking or performing a ground disturbance within a pipeline right of way should abide by the directions of the pipeline company and must abide by the terms of any agreements specific to the undertaking.

The excavator should protect and preserve the staking, marking, or other designations for underground facilities until they are no longer required for proper and safe excavation. The excavator should stop excavating and notify One-Call if the markings are removed, altered or are no longer visible.

The pipeline company should carry out such inspections as are necessary to ensure the continued safe operation of the pipeline while activities having the potential to damage the pipeline are occurring. This includes:

(a) witnessing and providing guidance for the exposure of the pipe;

(b) inspecting any supports or devices used to protect the pipe from damage;

(c) inspecting the condition of the pipe prior to backfilling; and

(d) witnessing backfill operations over the pipe until the amount of backfill is sufficient to prevent accidental contact damage to the pipe.

The person undertaking a ground disturbance should protect all facilities from damage when backfilling. Material that could damage facilities or interfere with the accuracy of future locates should not be buried.

12 REPORTING

12.1 REGULATORY TEXT

REPORTING

21. Persons undertaking activities or events having the potential to damage a pipeline shall immediately notify the pipeline company of any conditions, activities or actions which could reasonably be expected to have caused damage to the pipeline.

22. The pipeline company shall investigate all activities or events reported under section 21 and shall keep records of these investigations.

23. The pipeline company shall immediately report to the Board

(a) any violation of these Regulations; and

(b) the results of investigations of activities or events reported under section 21 where the investigation reveals the events or activities may have resulted in damage to the pipeline.

12.2 GUIDANCE NOTES

Enacting Authority

Section 21 - Enacted under subsection 112(5) of the Act.
Section 22 - Enacted under subsection 48(2) of the Act.
Section 23 - Enacted under subsection 48(2) of the Act.

Activities or events which should be reported to the pipeline company under section 21 include:

(a) unauthorized ground disturbance within the right of way;

(b) ground disturbances without proper notification;

(c) unauthorized movement of vehicles or mobile equipment over pipelines; and

(d) unauthorized mechanical contact with a pipe.

Any contact with a pipe resulting in a release of contents from the pipe must be immediately reported to the pipeline company and to local emergency response agencies through the use of "911" or other applicable emergency phone numbers.

The pipeline company shall immediately report to the Board all damage to its pipeline.

All reports made under section 21 should be investigated by the pipeline company as soon as practical. The findings from investigations should be communicated verbally and in written form to all parties involved in the incident. A copy of the investigation report should be retained on file by the pipeline company for the life of the pipeline.

The investigation report should contain the following information:

(a) the nature, location, date and time of the incident;

(b) the names, addresses and contact information for all persons involved in the incident and the response;

(c) a full description of the damage to the pipeline (if any);

(d) the pipe contents and operating parameters at the time of the incident;

(e) copies of locate tickets;

(f) confirmation that One-Call was contacted;

(g) a statement as to the accuracy of surface markings (if a locate was performed);

(h) photographs and sketches providing pertinent details;

(i) a description of any interruption of or reduction in service resulting from the incident;

(j) a description of the actions taken by the pipeline company to protect persons, property and the environment;

(k) a description of the repairs made or to be made by the pipeline company;

(l) a description of the nature and extent of any adverse environmental effects;

(m) a summary of the nature and extent of any concerns expressed to the pipeline company by the public related to the incident;

(n) a descriptive assessment of any continuing hazards resulting from or related to the incident;

(o) a list of vehicles and equipment directly involved in the incident;

(p) other significant facts that are known to be relevant to the cause of the incident; and

(q) a list of witnesses along with their addresses and telephone numbers.

13 AUDIT

13.1 REGULATORY TEXT

AUDIT

24. The pipeline company shall develop, implement and maintain an audit program for the purposes of verifying compliance with these Regulations.

25. The audit program described in section 24 shall include

(a) requirements for the evaluation of the adequacy and effectiveness of the damage prevention program required by section 4;

(b) mechanisms and procedures for the refinement of pipeline company programs and procedures; and

(c) requirements for the creation, storage and handling of audit materials, records and reports.

13.2 GUIDANCE NOTES

Enacting Authority

Section 24 - Enacted under subsection 48(2) of the Act.
Section 25 - Enacted under subsection 48(2) of the Act.

Audits are required under section 53 of the OPR for a number of programs and initiatives pertaining to the design, construction, operation and abandonment of pipelines under the jurisdiction of the NEB. Similarly, these Regulations require that companies develop an audit program for companies which can be used to assess compliance.

Additional guidance on the development of audit programs can be found in the *Guidance Notes for the Onshore Pipeline Regulations.*

Consideration should be given to the following when developing an audit program under section 24:

(a) periodic evaluation of damage prevention programs to assess the effectiveness of the message and media. This evaluation may include:

- (i) a repeatable measurement of audience awareness (such as an assessment of the achievement of goals);
- (ii) review and recommendations for updating of program content; and
- (iii) opinion surveys of audiences with respect to the effectiveness of the pipeline company's communications;

(b) verification of the completeness and adequacy of records necessary to demonstrate compliance;

(c) evidence of compliance and adherence to pipeline company programs, policies and procedures; and

(d) the adequacy and completeness of records.

Audits should be conducted so that the results may be used for benchmarking with previous audits and/or external data when available and appropriate.

14 RECORDS

14.1 REGULATORY TEXT

RECORDS

26. The pipeline company shall develop, implement and maintain a program for the management of records necessary to demonstrate compliance with these Regulations.

14.2 GUIDANCE NOTES

Enacting Authority

Section 26 - Enacted under subsection 48(2) of the Act.

Record management systems should outline what, when, and how appropriate records are to be created, stored, retrieved, modified, and removed (when no longer valid) in a timely manner. Companies should maintain other appropriate records at pertinent locations to capture relevant reviews, analyses, and decisions made during the implementation of pipeline company programs.

Record management systems should provide sufficient documentation to demonstrate a pipeline company's due diligence as well as the adequacy and effectiveness of its programs in ensuring the safety of persons and the protection of property and the environment during the design, construction, operation, and abandonment of its pipelines.

15 IN FORCE

15.1 PROPOSED REGULATION

27. The National Energy Board Pipeline Crossing Regulations, Part I (SOR/88-528) and the National Energy Board Pipeline Crossing Regulations, Part II (SOR/88-529) are repealed.

28. These Regulations come into force on the day they are registered.

APPENDICES

APPENDIX 1

Penalties

The Board is considering fines as set out in the following table. These fines would be issued and collected in accordance with the *Contraventions Act* and *Contraventions Regulations*.

Offence	Section	Fine
Failure to notify the pipeline company of any conditions, activities or actions which could reasonably be expected to have caused damage to the pipeline.	21	$500
Failure to report to the Board any violation of these Regulations.	23(a)	$500
Failure to report to the Board the results of investigations of activities or events reported under section 21 where the investigation reveals the events or activities may have resulted in damage to the pipeline.	23(b)	$500
Undertaking excavations outside the safety zone having the potential to damage a pipeline without notifying the pipeline company a minimum of three (3) working days prior to commencing the activities.	11(1)	$500
Failure to notify the pipeline company a minimum of three (3) working days prior to commencing a ground disturbance within the safety zone.	12	$500
Failure of the pipeline company or its designated representative to be present during mechanical excavation within five (5) metres of the centerline of a buried pipe which is part of the pipeline.	19(a)	$500
Failure of the pipeline company its designated representative to be present during backfilling of excavations where its facilities have been exposed.	19(b)	$500
Failure of the pipeline company or its designated representative to make a record of all activities as described in subsection 19(a) and 19(b).	19(c)	$500
Operation of mechanical excavating equipment within five (5) metres of the centerline of a buried pipe before the location of the pipe has been positively determined by exposure or equivalent means.	20	$500

Failure of the pipeline company to determine if the ground disturbance has the potential to damage the pipeline within three (3) working days after notification.	13(1)(a)	$250
Failure of the pipeline company to locate the pipeline if required within three (3) working days after notification.	13(1)(b)	$250
Failure of the pipeline company to inform the person responsible for the activities of all information pertinent to the prevention of damage to the pipeline within three (3) working days after notification.	13(1)(c)	$250
Failure of the locator to accurately identify the horizontal alignment of the pipeline within ± 1.0 metres.	17	$250

APPENDIX 2

Application for Leave

Section 81

Leave pursuant to section 81 of the Act is required prior to undertaking any mining or prospecting operations within 40 metres of the edge of the right of way of pipelines under the jurisdiction of the Board. In considering any application for leave pursuant to section 81, the Board would normally have the proposal assessed by the affected pipeline companies to ensure that the proposed activities can be carried out in a manner which ensures the continued, safe operation of the pipelines. Ideally, any application for leave would be made after the terms and conditions for the proposed work have been negotiated between the pipeline company and the proponent.

An application for leave pursuant to section 81 should include:

(a) a detailed drawing showing the precise location and profile of the proposed mine or quarry and its proximity to the pipeline(s);

(b) a written request for leave pursuant to section 81 of the Act;

(c) Copies of pertinent correspondence between the applicant and the pipeline company (including any agreements that have been reached);

(d) a tentative schedule for the proposed mining activities; and

(e) any other information which the applicant believes necessary for consideration of the application.

The Board notes that prior to granting leave for any application made under section 81, the Board is obligated to perform an environmental assessment pursuant to the *Canadian Environmental Assessment Act* (CEAA). Thus, the Board requires sufficient information to enable it to carry out its CEAA responsibilities. At a minimum, the following information is required:

(a) a description of the proposed project and the associated activities;

(b) a description of the current environment which could potentially be affected by the proposed project;

(c) a description of the potential environmental effects as a result of the proposed project;

(d) a description of any proposed mitigative measures; and

(e) after considering the proposed mitigative measures, an assessment of the significance of potential adverse environmental effects which may result from the proposed project.

The level of detail of the information provided to the Board should correspond to the nature and magnitude of the anticipated environmental effects of the proposed project. It should also provide the Board with sufficient information to examine the potential environmental and socioeconomic effects of the proposed project. Additional information regarding environmental assessments under the CEAA may also be obtained from the Canadian Environmental Assessment Agency's Website (www.ceaa.gc.ca).

In addition to the aforementioned, an applicant must comply with the DPR where the activities fall within the "application" scope as set out in section 2 of these Regulations.